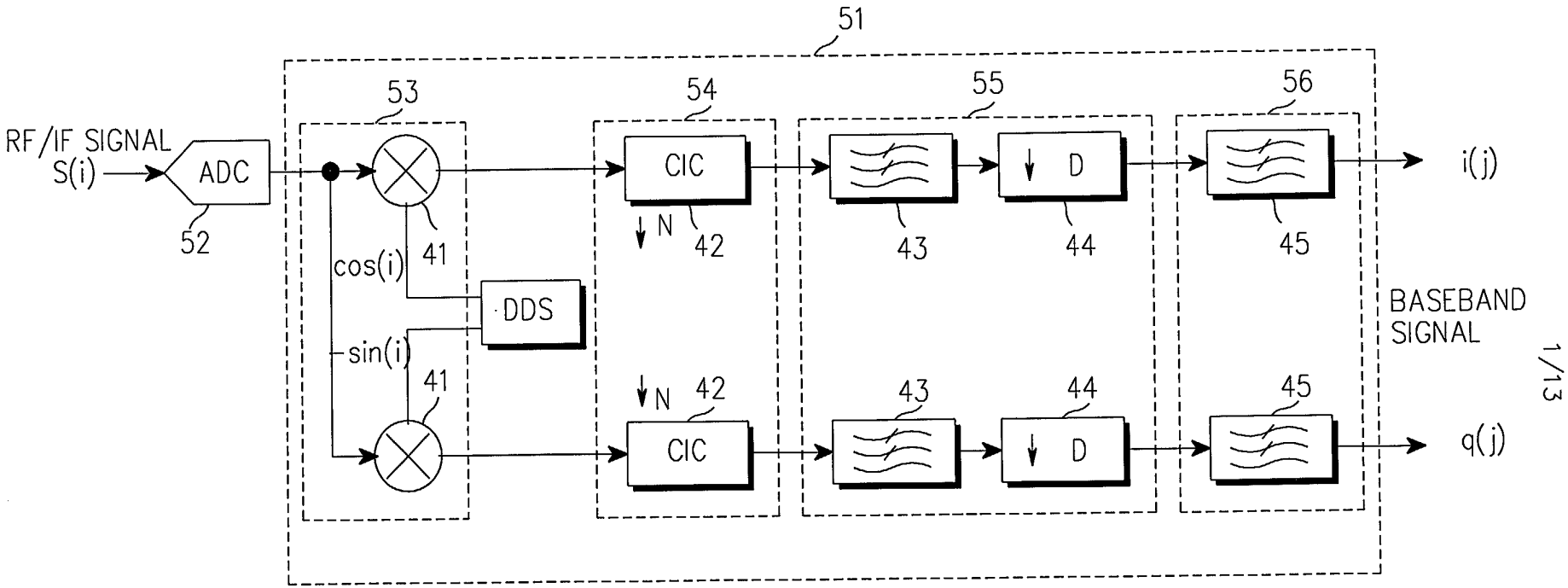

FIG. 1
(PRIOR ART)

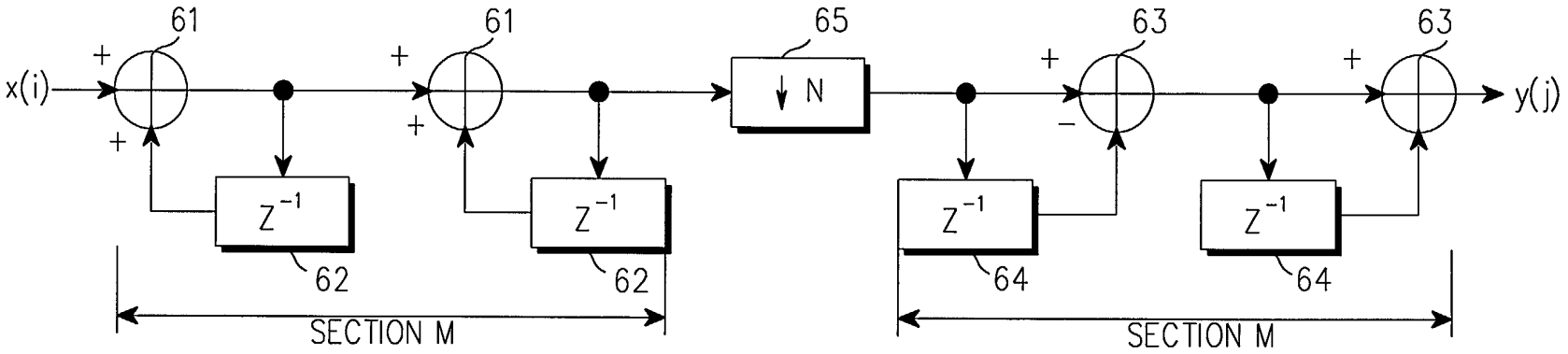

FIG. 2
(PRIOR ART)

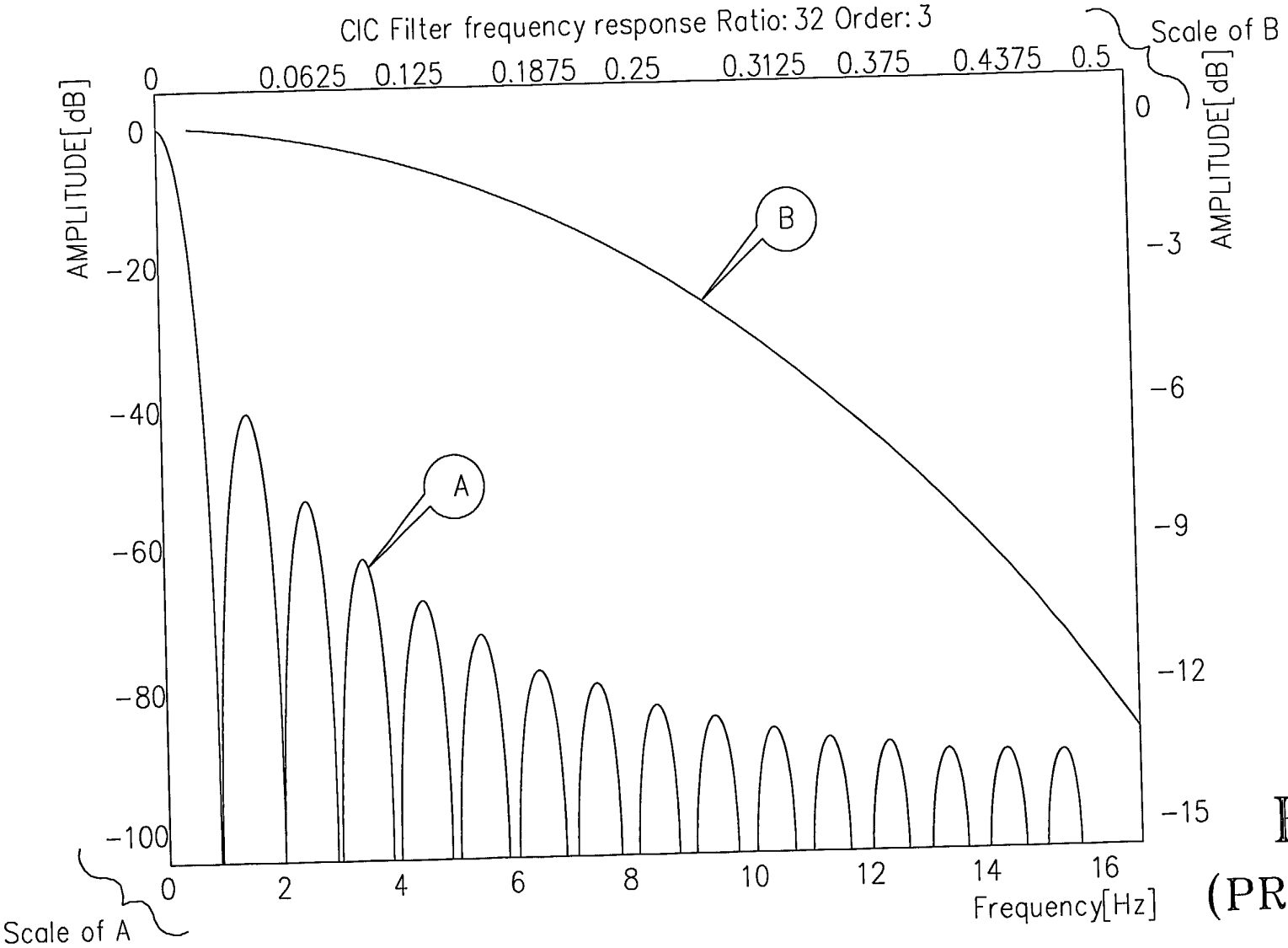

FIG.3
(PRIOR ART)

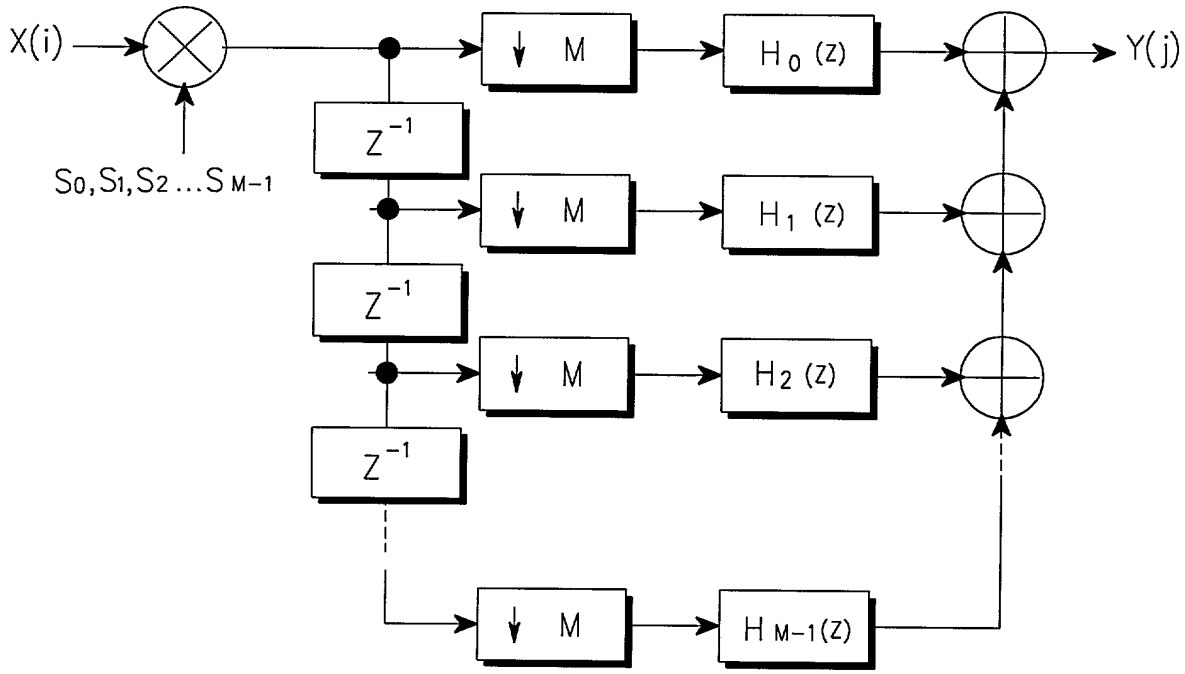
X(i)
Y(j)
S0, S1, S2 ... S M-1
Z -1
M
H 0 (Z)
H 1 (Z)
H 2 (Z)
H M-1(Z)

FIG. 4A

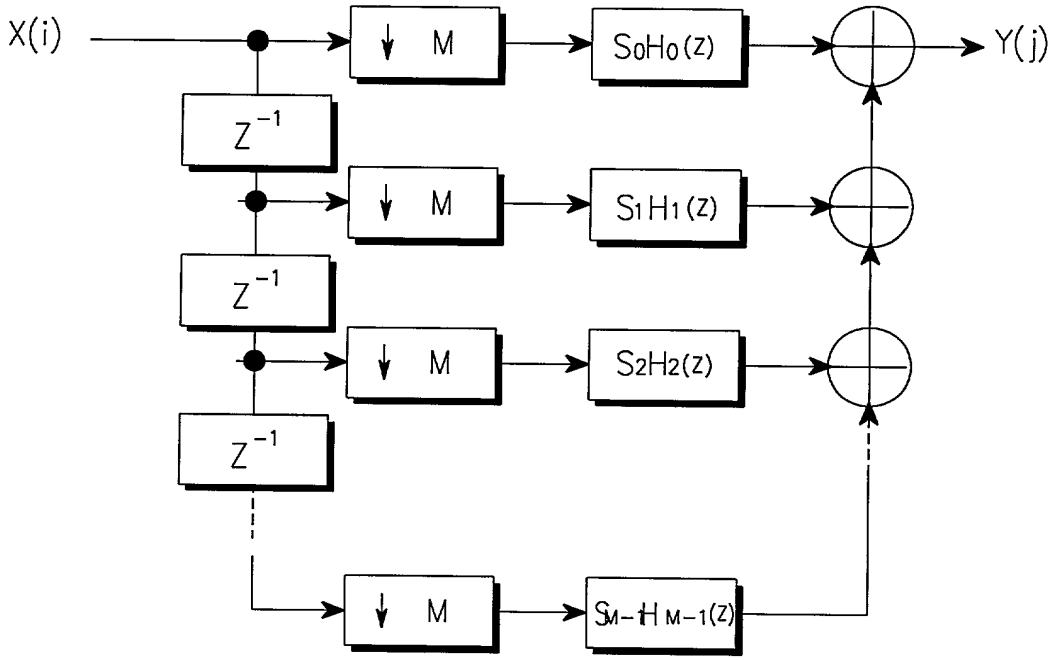
X(i)
Y(j)
Z -1
M
S0H0(Z)
S1H1(Z)
S2H2(Z)
SM-1HM-1(Z)

FIG. 4B

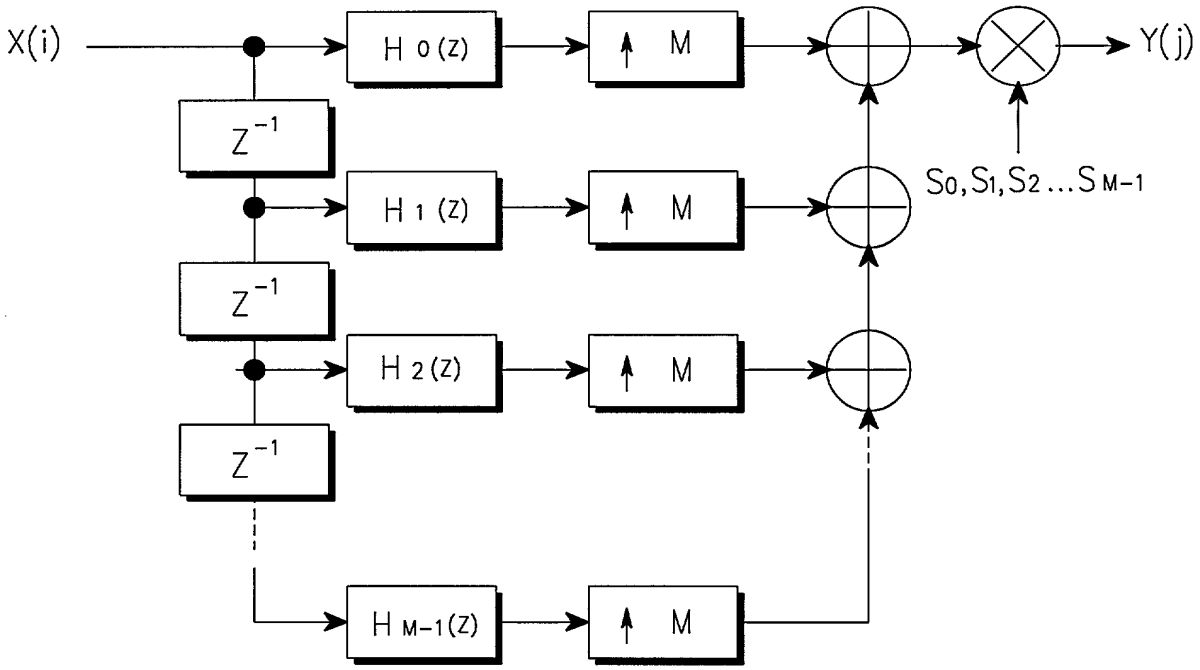
X(i)
H 0 (Z)
M
Y(j)
Z^{-1}
H 1 (Z)
M
Z^{-1}
H 2 (Z)
M
Z^{-1}
$S_0, S_1, S_2 \ldots S_{M-1}$
$H_{M-1}(Z)$
M

FIG. 5A

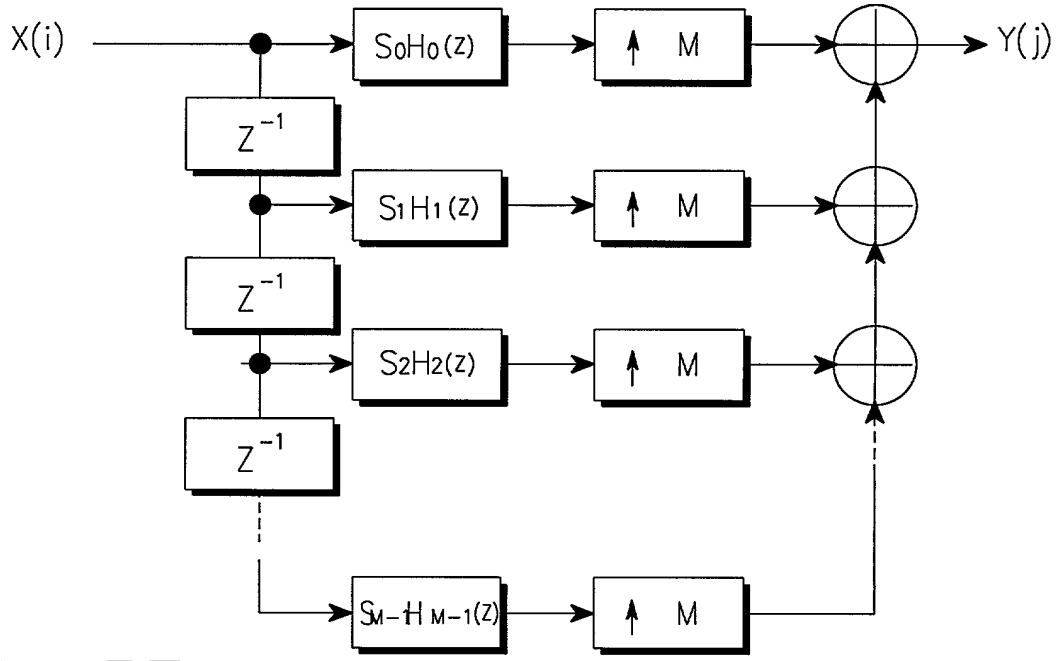
X(i)
$S_0H_0(Z)$
M
Y(j)
Z^{-1}
$S_1H_1(Z)$
M
Z^{-1}
$S_2H_2(Z)$
M
Z^{-1}
$S_{M-1}H_{M-1}(Z)$
M

FIG. 5B

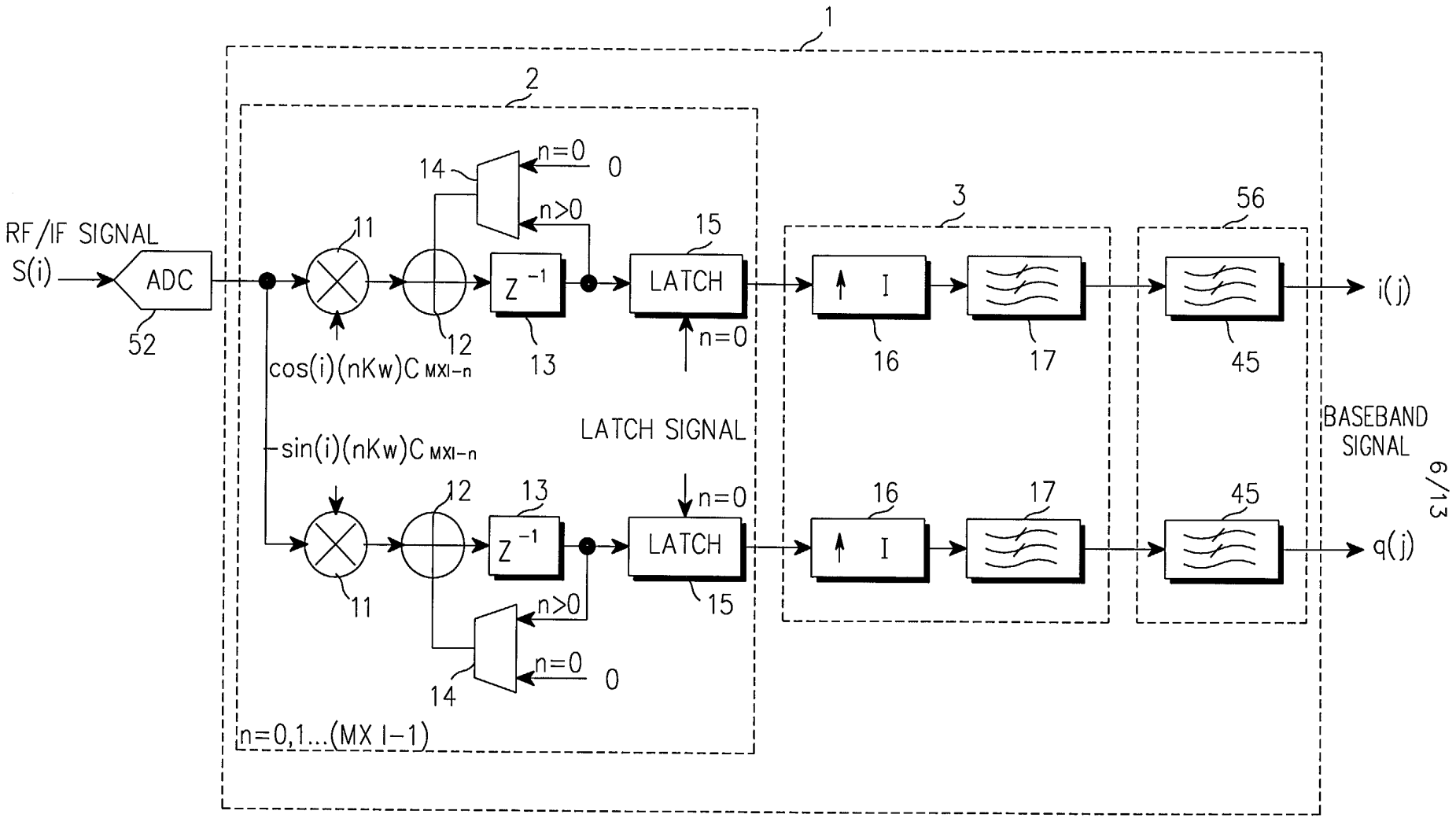
1
2
RF/IF SIGNAL
S(i)
ADC
52
11
12
13
14
15
n=0
0
n>0
LATCH
n=0
cos(i)(nKw)C MXI-n
sin(i)(nKw)C MXI-n
LATCH SIGNAL
n=0,1...(MX I-1)
3
16
I
17
56
45
i(j)
q(j)
BASEBAND
SIGNAL

FIG. 6

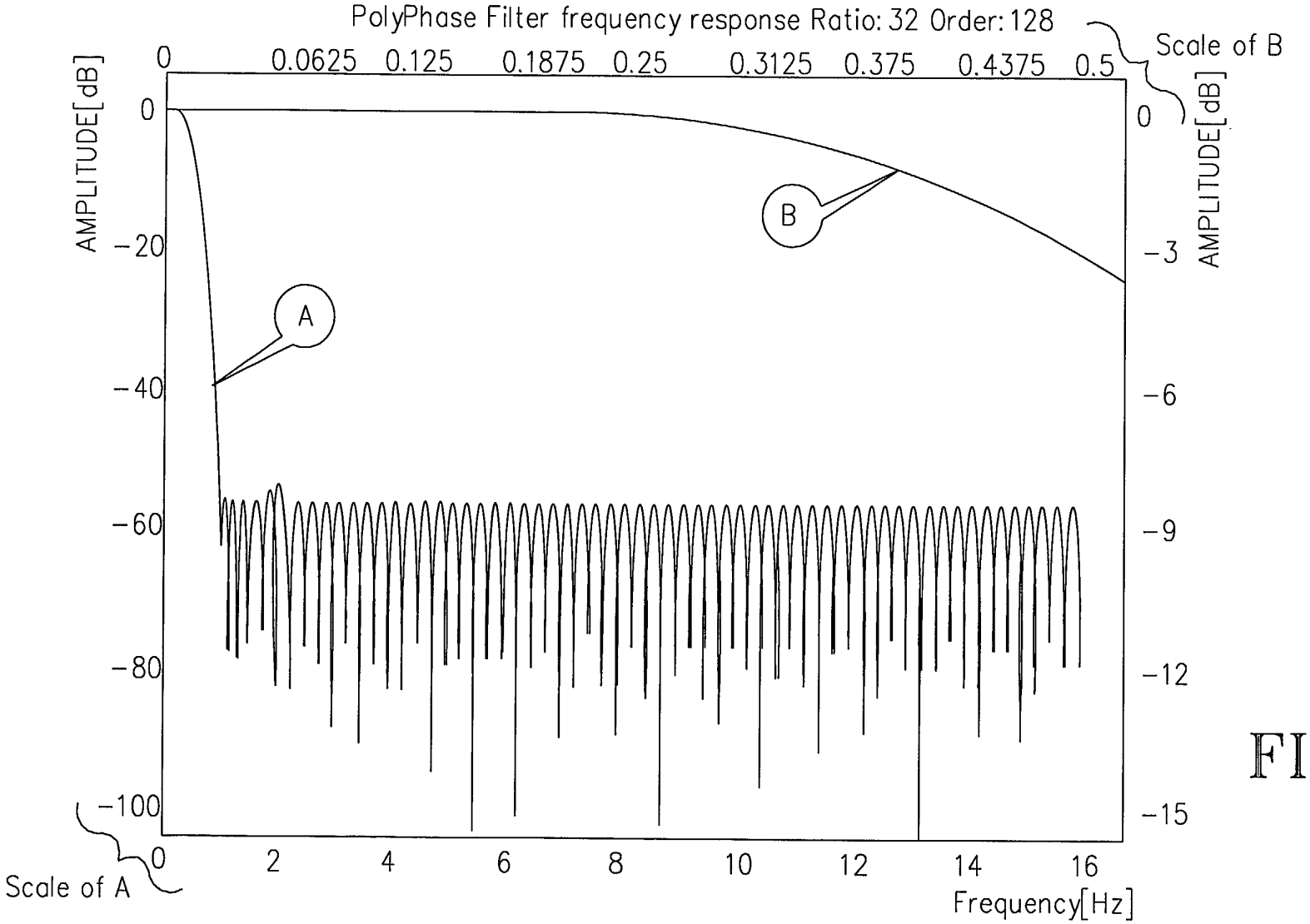
PolyPhase Filter frequency response Ratio: 32 Order: 128
AMPLITUDE[dB]
0
-20
-40
-60
-80
-100
0
0.0625
0.125
0.1875
0.25
0.3125
0.375
0.4375
0.5
Scale of B
0
-3
-6
-9
-12
-15
A
B
0
2
4
6
8
10
12
14
16
Frequency[Hz]
Scale of A

FIG. 7

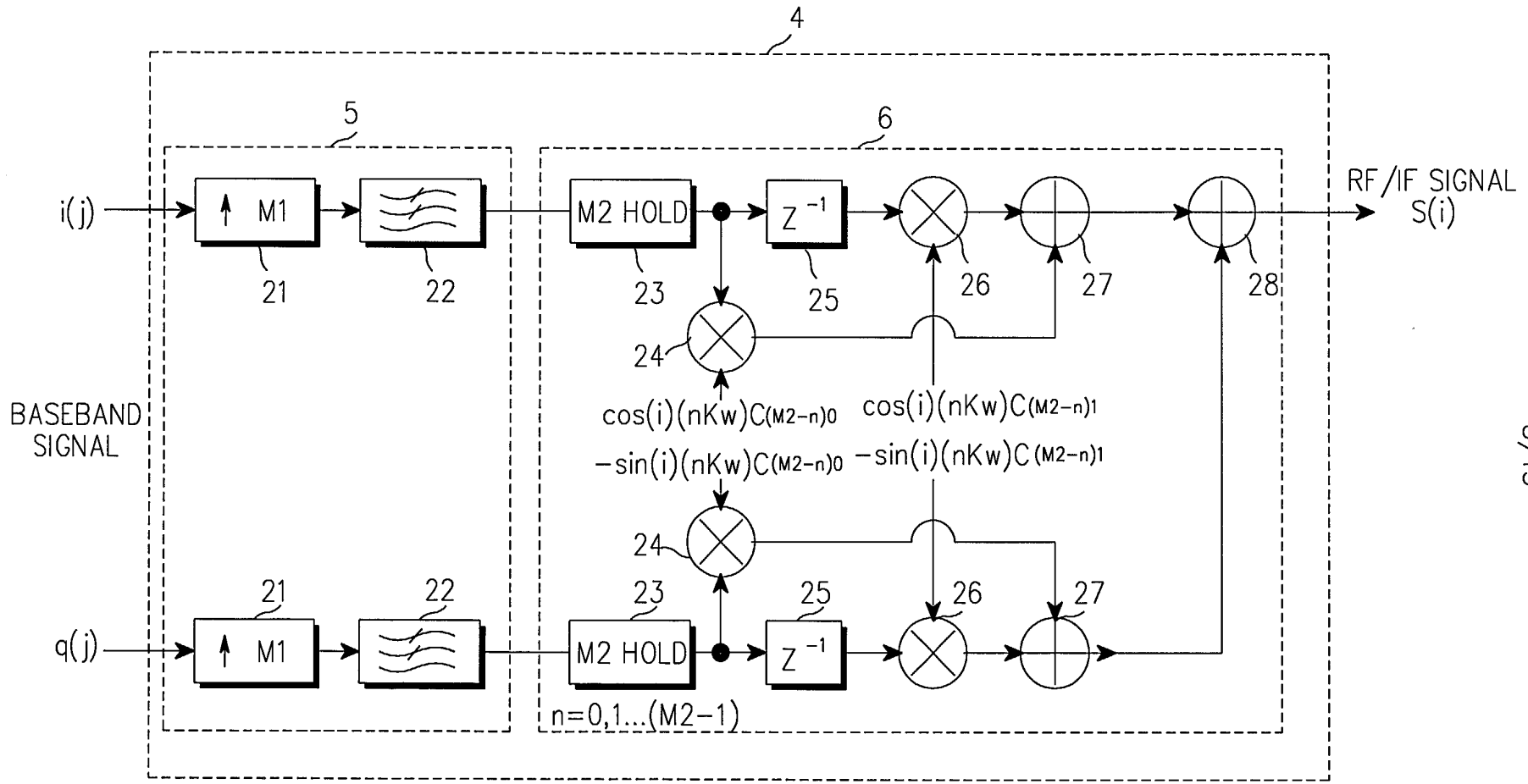
4
5
6
i(j)
q(j)
M1
M1
21
22
21
22
M2 HOLD
M2 HOLD
23
23
Z -1
Z -1
25
25
24
24
26
26
27
27
28
RF/IF SIGNAL
S(i)
BASEBAND
SIGNAL
cos(i)(nKw)C(M2-n)0
-sin(i)(nKw)C(M2-n)0
cos(i)(nKw)C(M2-n)1
-sin(i)(nKw)C(M2-n)1
n=0,1...(M2-1)

FIG. 8

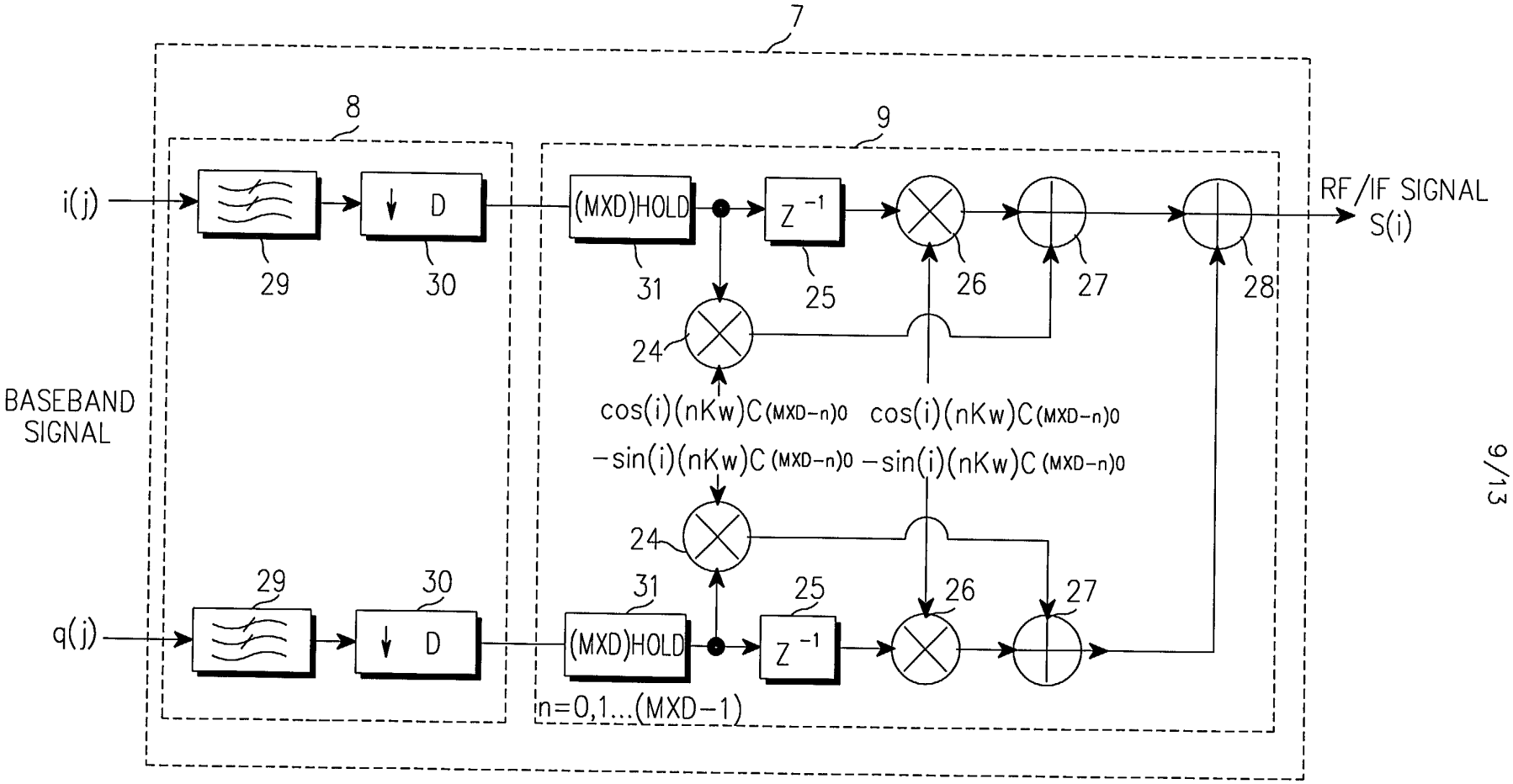
7
8
9
i(j)
q(j)
BASEBAND SIGNAL
29
30
D
(MXD)HOLD
31
Z -1
25
24
26
27
28
RF/IF SIGNAL S(i)
cos(i)(nKw)C(MXD-n)0
-sin(i)(nKw)C(MXD-n)0
n=0,1...(MXD-1)

FIG. 9

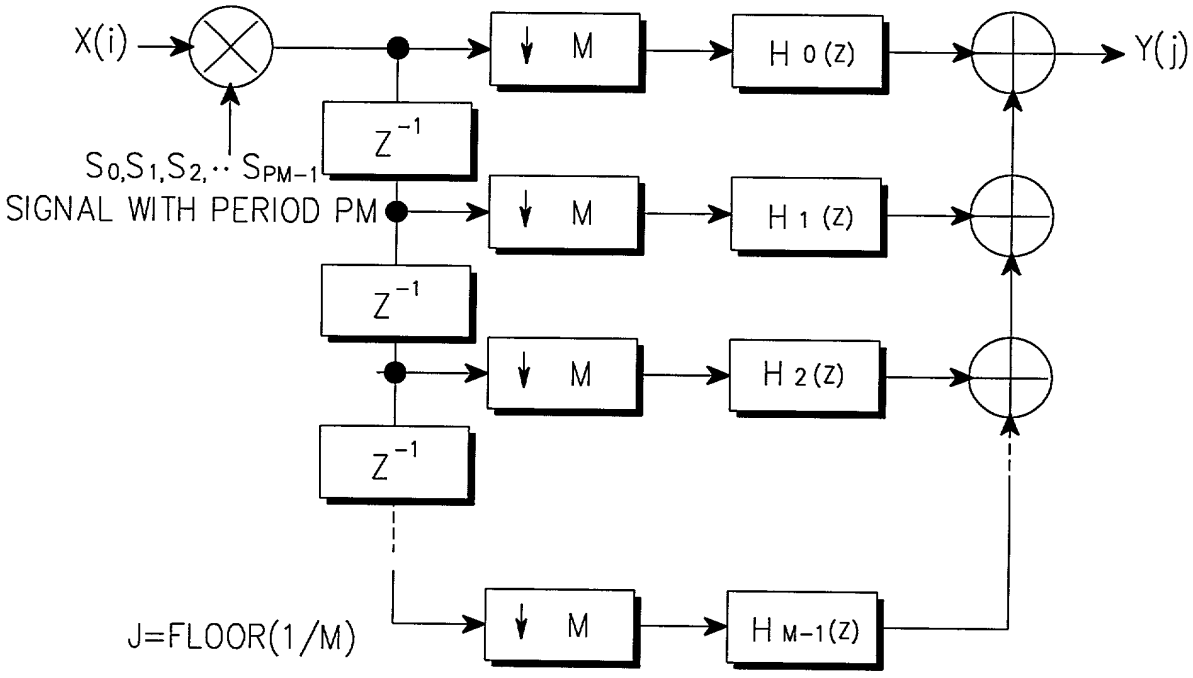

FIG. 10A

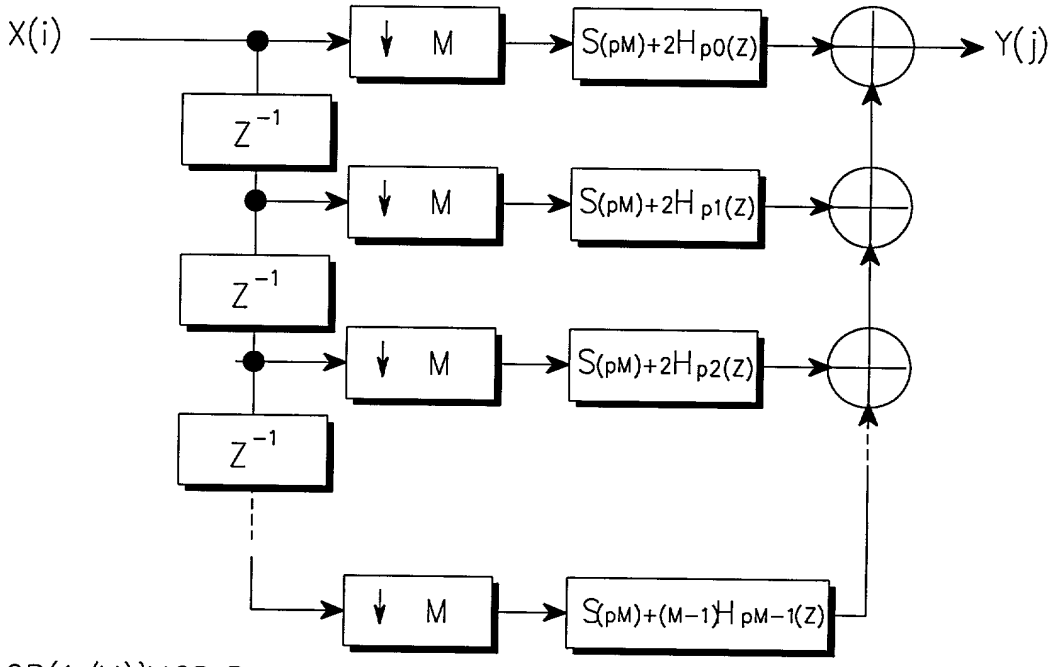

FIG. 10B

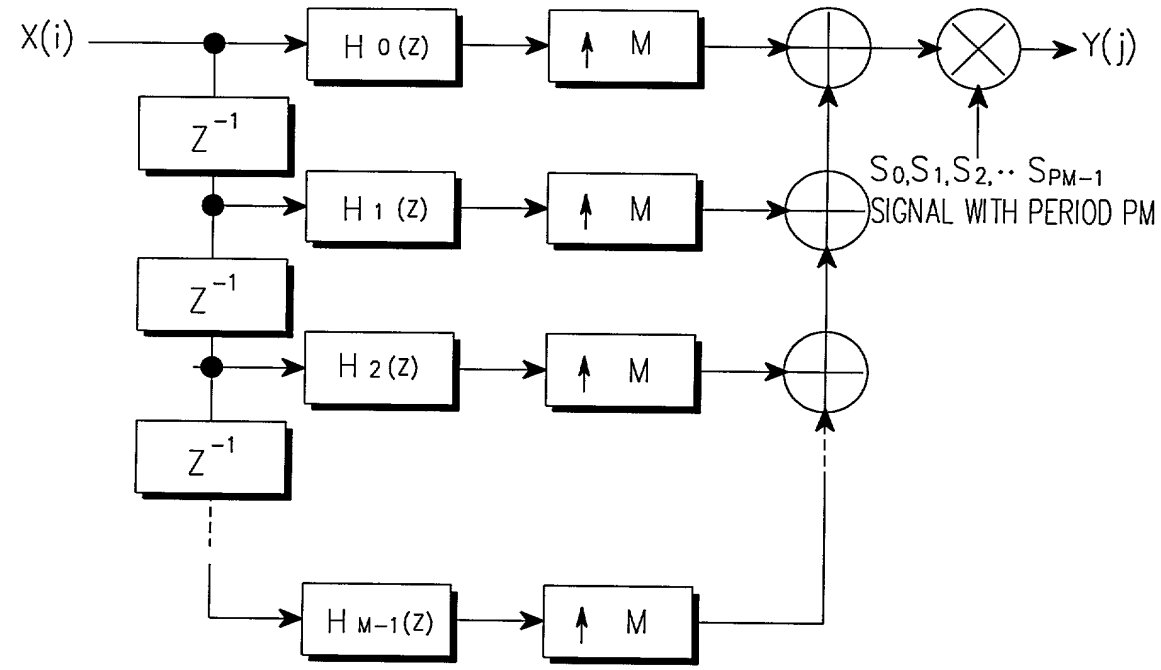

FIG. 11A

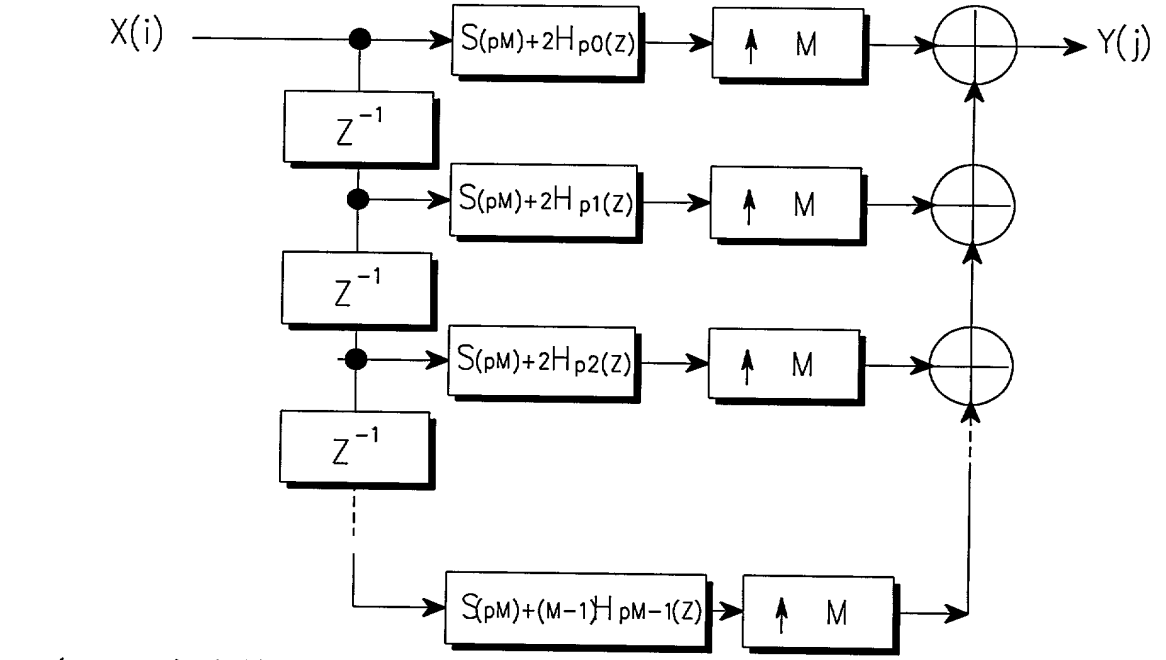

FIG. 11B

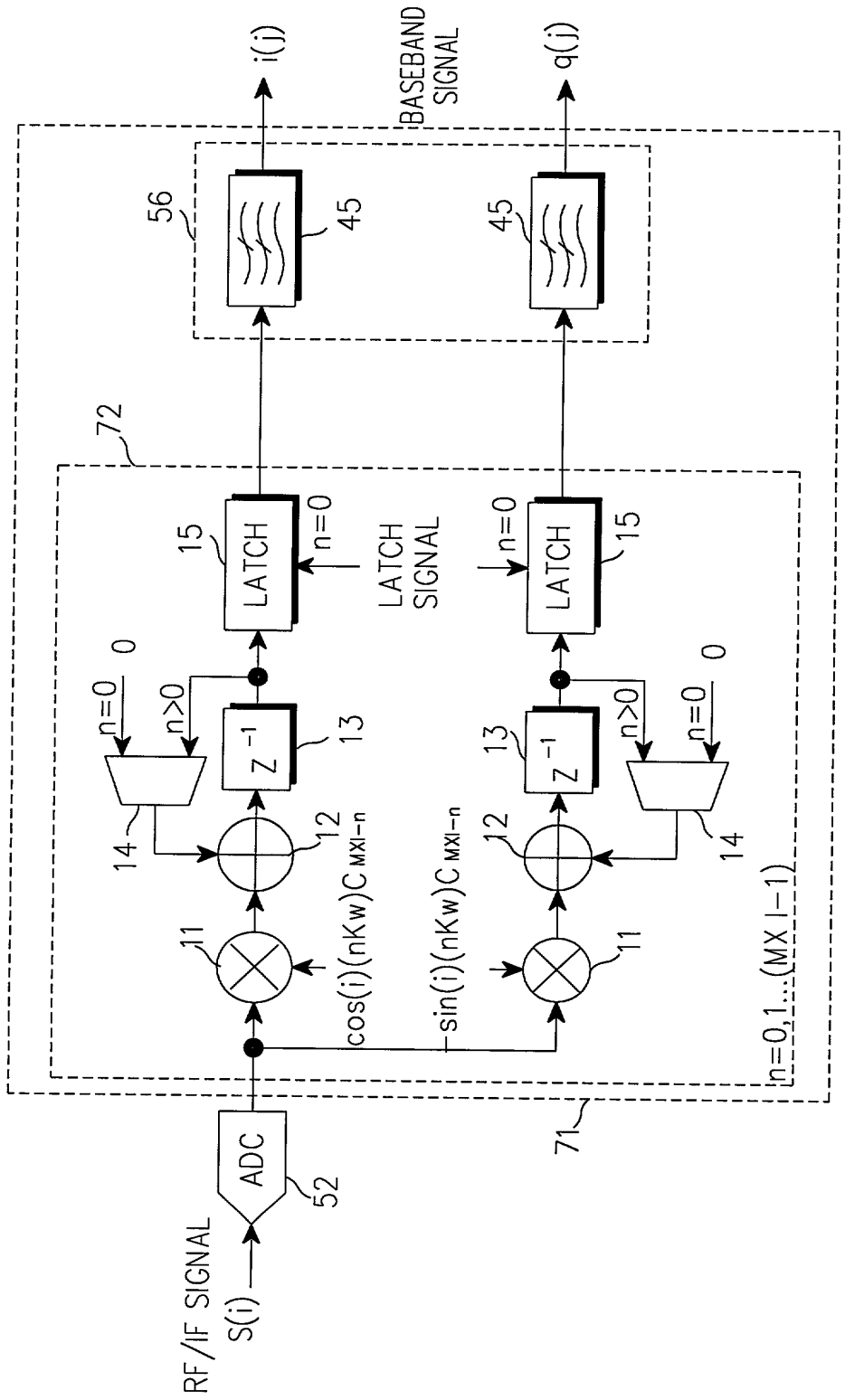
RF/IF SIGNAL
S(i)
ADC
52
71
72
n=0,1,...(MX I-1)
cos(i)(nKw)C MXI-n
sin(i)(nKw)C MXI-n
11
12
13
14
15
LATCH
LATCH SIGNAL
n=0
n>0
0
45
56
BASEBAND SIGNAL
i(j)
q(j)

FIG. 12

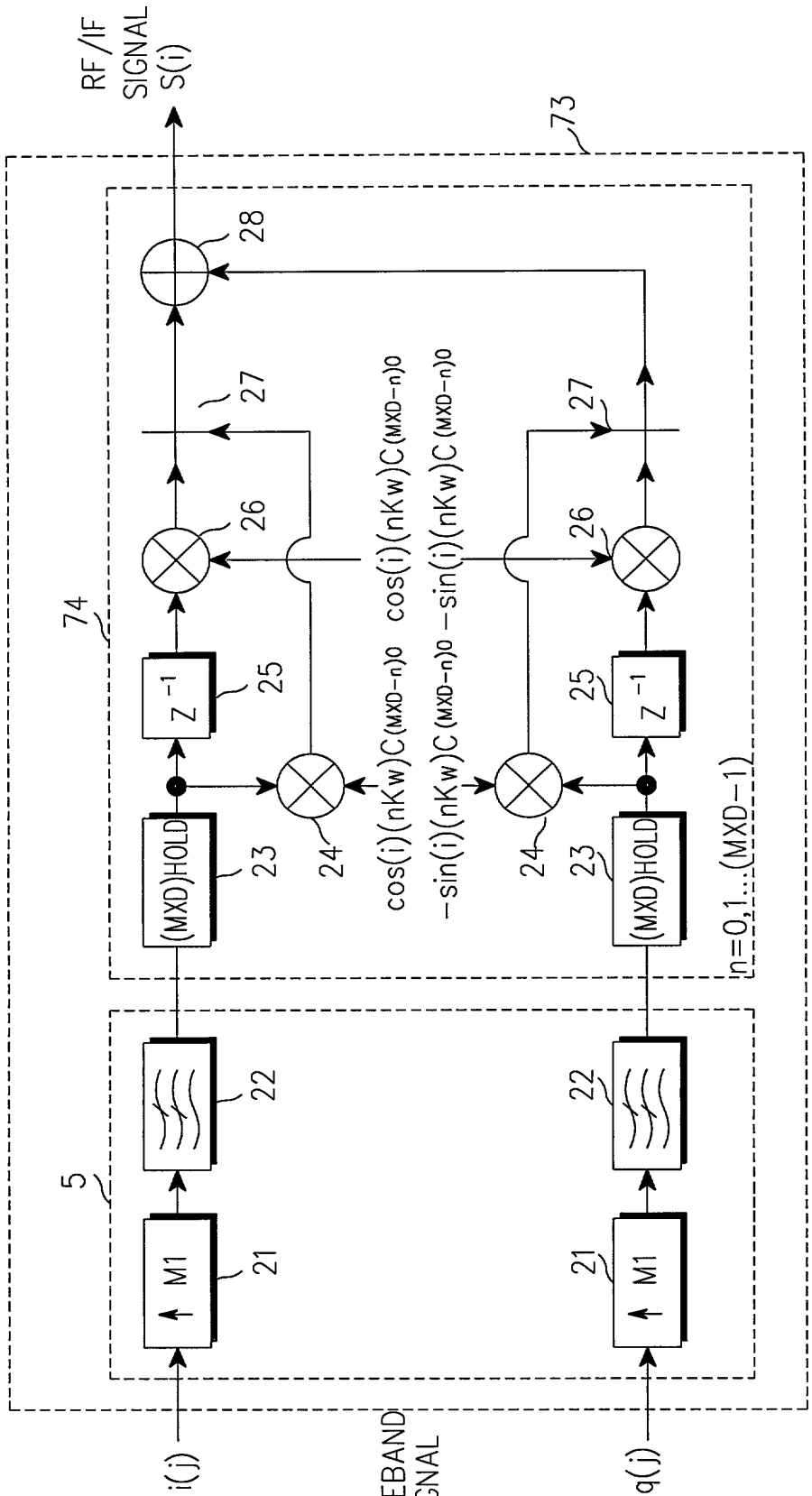
RF/IF SIGNAL S(i)
73
74
5
28
27
26
25
Z -1
(MXD)HOLD
23
24
22
M1
21
cos(i)(nKw)C(MXD-n)0
-sin(i)(nKw)C(MXD-n)0
n=0,1,...(MXD-1)
i(j)
q(j)
BASEBAND SIGNAL

FIG. 13